"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

L 10028-67 EWT(1)/EWP(m) IJP(c) WJ

ACC NR: AP6034581 SOURCE CODE: UR/0382/66/000/003/0064/0068

45

AUTHOR: Ryabinin, A. G.

ORG: none

TITLE: Unsteady plane parallel flow of a conductive fluid in a magnetohydrodynamic channel with the pressure gradient arbitrarily changing in time

SOURCE: Magnitnaya gidrodinamika, no. 3, 1966, 64-68

TOPIC TAGS: fluid flow, MHD flow, pressure gradient, Reynolds number, conductive fluid, plane parallel flow, unsteady flow

ABSTRACT: A theoretical investigation is carried out for a nonstationary flow of a viscous incompressible conducting fluid in a magnetohydrodynamic channel under the effect of a pressure gradient arbitrarily changing in time with the magnetic Reynolds number for less than unity. The solution of the problem is derived for a fluid flow under conditions of a generating power in plane channels with an arbitrarily load factor. Two special cases are analyzed for an unsteady fluid flow. The first is with the sudden application of a constant pressure gradient, and the second is with the pressure gradient changing in time following an exponential law. Orig.

Card 1/2 UDC: 538.4

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

L 10028-67

ACC NR: AP6034581

art. has: 2 figures and 21 formulas. [Based on author's abstract]

SUB CODE: 20/ SUBM DATE: 23Nov65/ ORIG REF: 005/ OTH REF: 005/

Card 2/2 egk

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

S/137/62/000/001/033/237
A060/A101

AUTHORS: Koz'min, Yu. A., Zemskov, S. V., Ryabinin, A. I.

TITLE: Application of the sulfide-sulfite method in the processing of tellurium-containing materials

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1962, 22, abstract 10164 ("Metallurg. i khim. prom-st' Kazakhstana. Nauchno-tekhn. sb.", 1961, no. 1(11), 23-25)

TEXT: The authors studied the possibility of applying the sulfide-sulfite method to the processing of rich Te-containing products. It is shown that this method ensures the extraction of 93 - 94% of the Te from the primary hydroxide (at an Na_2S expenditure of 5 - 6 kg per 1 kg Te) as against 60 - 70% extraction by the soda method, and when soda slags are processed - 81-84% versus 40-50%. The reagent expenditure and process duration are reduced when the sulfide-sulfite method is used.

G. Svodtseva

[Abstracter's note: Complete translation]

Card 1/1

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

S/137/62/000/001/032/237
A060/A101

AUTHORS: Koz'min, Yu. A., Ryabinin, A. I., Zemskov, S. V.

TITLE: On the oxidation of tellurium up to the tetravalent state

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1962, 22, abstract 1G163 ("Metallurg. i khim. prom-st' Kazakhstana, Nauchn.-tekhn. sb.", 1961, no. 2(12), 57-61)

TEXT: A study was made as to the possibility of obtaining water-soluble Te from anodic copper electrolytic slimes by producing a definite composition of the gaseous phase and the charge preparation schedule. It was established that in the course of oxidizing roasting of the slime with soda the Te is transformed almost entirely into the hexa-valent variety, and in the course of the aqueous lixiviation of the clinker if remains in the cake. Calcination of the clinker in a stream of CO_2 or N_2 at 700 - 750°C affords the possibility of transforming 70% and more of the Te into the tetra-valent, soluble variety. The reduction of Te to Te^{++++} by carbon monoxide occurs at lower temperatures. In the laboratory investigations the transformation of Te into Te^{++++} constituted 80 - 90%.

G. Svodtseva

[Abstracter's note: Complete translation]

Card 1/1

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27339
S/080/61/034/009/001/016
D204/D305

AUTHORS: Ryabinin, A.I., and Koz'min, Yu.A.

TITLE: Application of anionite EDE-10 in hydroxyl form for separating lanthanum from rare-earth elements

PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 9, 1961, 1907 - 1911

TEXT: In an introductory review of previous works, reference is made to V.V. Serebrennikov (Ref. 4: Khimiya redkozemel'nykh elementov, I. 1959) and A.V. Nikolayev, A.S. Maslennikova and A.A. Sorokin (Ref. 6: Sb. "redkozemel'nyye elementy", Izd. AN SSSR, 71, 1958). The experimental work described was made with sclutions in nitric acid of rare earth elements of pH value 5.0 from which Ce had been quantitatively eliminated by conventional methods. The anionite was prepared in the usual way, swelling effected in NaCl solution and washing with 5 % HCl. The possibility of separating La from the other rare-earth elements and the optimum conditions

Card 1/2

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Application of anionite EDE-10 ...

for its maximum separation were studied. The results show that it is possible, by this method, to obtain pure La_2O_3 (99 %) from rare-earth mixtures with a maximum La content of 67 %. Generally, using anionite EDE-10 in hydroxyl form, it is possible to separate La_2O_3 of 98-98.5 % purity from mixtures containing 65-70 % La_2O_3. The principle is applicable to any mixture containing elements of differing basicity. There are 2 tables and 12 references: 5 Soviet-bloc and 7 non-Soviet-bloc. The references to the English-language publications read as follows: H. Fogg, L. Hess, J. Amer. Chem. Soc., 58, 1751,1936; R.W. Perkins, Anal. Chem. 29, 1, 152, 1957.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy gorno-metallurgicheskiy institut tsvetnykh metallov (All-Union Scientific Mining-Metallurgical Research Institute of Non-Ferrous Metals)

SUBMITTED: July 22, 1960

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

S/080/62/035/003/005/024
D258/D302

AUTHORS: Ryabinin, A. I. and Koz'min, Yu. A.

TITLE: Separation of the rare earth elements by anion-exchange resins in the hydroxylic form

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 3, 1962, 499-503

TEXT: The aims of this work were firstly to compare the efficiency of some anion exchangers (OH form) in separating La from the other rare earth elements by the basic fractionation method; and, secondly, to investigate the lanthanum-precipitating capacity of these resins. 7 Soviet-produced resins were tested for the separation-precipitation of lanthanum from didymium; the rare earths were in the form of nitrates. The method employed was earlier described by the authors (Ref. 1: ZhPKh., 34, 1907, (1961)). The resins АН-1 (AN-1), AN-18 and AN-23 failed to yield precipitates, while ЭДЭ-10 (EDE-10) showed the biggest precipitating capacity and also the biggest separating power. It was followed by resins AN-2F and

Card 1/3

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Separation of the ...

EDE-10P. Thus, the separation by EDE-10 of 3.85 g of a mixture containing 20.7% of dioxides resulted in a lanthanum fraction of 2.62 g, containing 4.7% of Di. The dependence of exchange capacity on both pH and exchange rate was studied by means of a potentiometric titration. The titration curves of EDE-10, EDE-10P and AN-2F were analogous to those of weak electrolytes and were used to calculate the exchange capacity of each resin at the pH of La-precipitation; a value of 0.80 mole equivalents/ml was obtained for EDE-10. The titration curves also allowed one to predict the possible use of a resin for fractionation. The authors pointed out that more efficient resins were needed for the fractionation of rare earths. There are 2 figures, 5 tables and 10 references: 8 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: R. Kunin, Ind. Eng. Ch., 46, 1, 118, (1954); H. Jugor and J. J. Bregman, J. Am. Chem. Soc., 70, (1948).

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy gornometallurgicheskiy institut tsvetnykh metallov (All-Union Sci-

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

S/080/62/035/003/005/024
D258/D302

Separation of the ...

entific Research Institute of Non-Ferrous Mining and metallurgy)

SUBMITTED: April 18, 1961

Card 3/3

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

L 41571-65 EWT(m)/EPF(n)-2/EWG(m)/EWP(t)/EWP(b) Pu-4 IJP(c) RDW/ES/JD/WW/JG
ACCESSION NR: AP5009424 S/0289/64/000/003/0060/0062

27
26
B

AUTHOR: Nikolayev, A.V.; Ryabinin, A.I.; Afanas'yev, Yu. A.

TITLE: Mutual influence of uranyl nitrate and thorium nitrate during joint extraction with tributyl phosphate

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya khimicheskikh nauk, no. 3, 1964, 60-62

TOPIC TAGS: tributyl phosphate, uranyl nitrate extraction, thorium nitrate extraction, separation coefficient, distribution coefficient, uranium refining

ABSTRACT: The authors studied the five-component extraction system $UO_2(NO_3)_2$ - $Th(NO_3)_4$ - 1.5 M HNO_3 - H_2O - TBP (tributyl phosphate) at 25C, a diagram of which is given. The distribution coefficients of nitric acid were found to be approximately constant (0.15 to 0.20), and the separation coefficients of uranyl and thorium nitrate ranged from 10 to 20. Thus, uranyl nitrate expels thorium nitrate from the organic into the aqueous phase; on the other hand, it was found that at low concentrations, uranyl nitrate can be displaced from the organic phase by thorium nitrate. At uranyl nitrate concentrations above 0.5 M, thorium nitrate has practically no effect on its extraction. A comparison of the data

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L 41571-65
ACCESSION NR: AP5009424

obtained with those of previous investigations led the authors to the conclusion that the stability of the solvates formed by tributyl phosphate decreases in the series Ce (IV), U (VI), Th (IV), HNO_3. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: Institut neorganicheskoy khimii Sibirskogo otdeleniya Akademii nauk SSSR, Novosibirsk (Institute of Inorganic Chemistry, Siberian Branch, Academy of Sciences, SSSR)

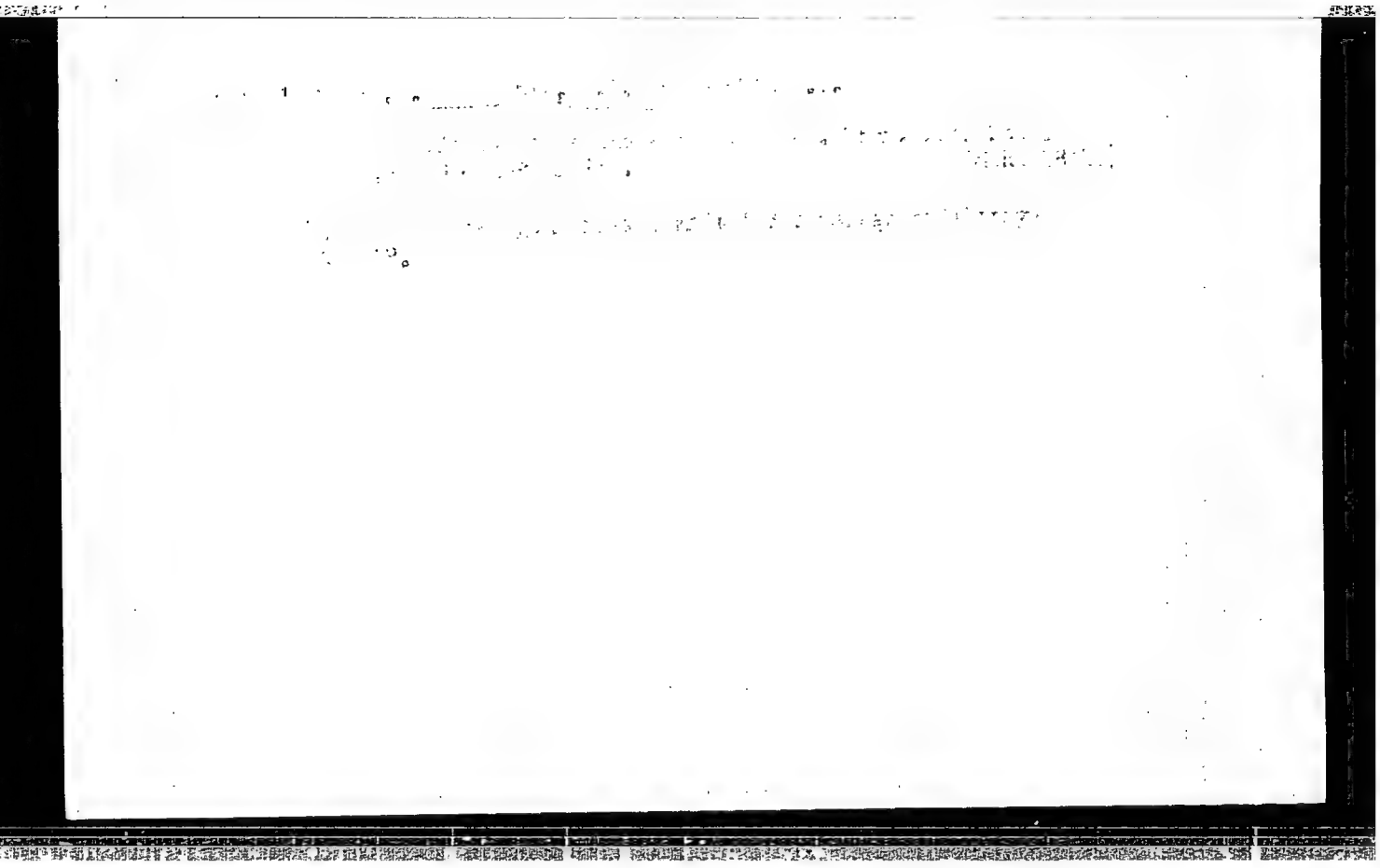
SUBMITTED: 10Jan64 ENCL: 00 SUB CODE: IC

NO REF SOV: 006 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0



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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

L 10984-66 EWT(m)/ETC(F)/EWG(m)/EWP(t)/EWP(b) LJP(c) JD/JG/RM

ACC NR: AP6000002 UR/0080/65/038/011/2410/2415

AUTHOR: Ryabinin, A.I.; Sorokina, A.A.

ORG: Institute of Inorganic Chemistry, Siberian Branch AN SSSR (Institut neorganicheskoy khimii SO AN SSSR)

TITLE: Separation of rare earth elements by fractional precipitation with anion exchangers

SOURCE: Zhurnal prikladnoy khimii, v.38, no.11, 1965, 2410-2415

TOPIC TAGS: chemical separation, ion exchange, rare earth element

ABSTRACT: The article presents new data on the fractionation of lanthanum with an EDE-10 anion exchanger in the hydroxyl form. It also demonstrates the possibility of the efficient concentration of samarium with anion exchangers in the hydroxyl form, and the separation of lanthanum from didymium with anion exchangers in the carbonate form. The experimental data is exhibited in tabular form and shows the effect of the amount of the EDE-10 anion exchanger and the duration of the precipitation on the purity of the lanthanum oxide, its degree of extraction, and the amount of precipitated rare earth element. Experiments were carried out with a total rare earth concentration containing 20.7% didymium at room temperature. A further table shows data on the separation of

Card 1/2 UDC: 66.094.94 + 546.65

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ACC NR: AP6000002 O

lanthanum oxide approximately 98.5% pure from mixtures of rare earth elements of various compositions. It is concluded that double fractionation with the EDE-10 anion exchanger in the hydroxyl form makes it possible to obtain lanthanum oxide 99.5-99.7% pure. The experiments demonstrated the possibility of the efficient separation of other rare earth elements (for example, samarium) in the hydroxyl form by the use of anion exchangers. Using the example of the EDE-10 anion exchanger in the carbonate and oxalate forms, the article shows the possibility of the fractional separation of rare earth elements in the form of salts. Orig. art. has: 1 figure and 5 tables.

SUB CODE: 07/ SUBM DATE: 07Sep63/ ORIG REF: 009/ OTH REF: 007

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

NIKOLAYEV, A.V.; AFANAS'YEV, Yu.A.; DURASOV, V.B.; RYABININ, A.I.

Determination of the size of solvate molecules formed by tributyl phosphate. Zhur. strukt. khim. 5 no.3:490-492 My-Je '64. (MIRA 18:7)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR, Novosibirsk.

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

NIKOLAYEV, A.V.; AFANAS'YEV, Yu.A.; RYABININ, A.I.; KOROLEVA, T.I.

Thermochemistry of cerium (IV) nitrate extraction with tributyl phosphate. Dokl. AN SSSR 159 no.4:851-852 D '64 (MIRA 18:1)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR. 2. Chlen-korrespondent AN SSSR (for Nikolayev).

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

NIKOLAYEV, A.V.; AFANAS'YEV, Yu.A.; RYABININ, A.I.

Extraction system $Th(NO_3)_4$ - HNO_3 - H_2O - $(C_4H_9O)_3PO$ at 25°C studied by means of extraction rays. Dokl. AN SSSR 152 no.5:1115-1117 O '63. (MIRA 16:12)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR.
2. Chlen-korrespondent AN SSSR (for Nikolayev).

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

AFANAS'YEV, Yu.A.; RYABININ, A.I.

Preparation of carrier-free UX, (Th^{234}) by the extraction method. Radiokhimiia 5 no.4:520-521 '63. (MIRA 16:10)

(Uranium) (Thorium) (Butyl phosphates)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

L 12413-63 EWT(m)/BDS ESD-3 RM

ACCESSION NR: AP3001406 S/0020/63/150/004/0820/0822 55 54

AUTHOR: Nikolayev, A. V. (Corresponding Member of the Academy of Sciences SSSR); Ryabinin, A. I.; Afanas'yev, Y. A.

TITLE: Mechanism of extraction of cerium nitrate (Roman four) from nitric oxide solutions with tributylphosphate (TBPh)

SOURCE: AN SSSR. Doklady, v. 150, no. 4, 1963, 820-822

TOPIC TAGS: extraction of cerium nitrate, sodium hydroxide

ABSTRACT: The mechanism of extraction of Ce(NO sub 3) sub 4 with tributylphosphate has been investigated. The existing two points of view stating that cerium is extracted into the TBPh in the form of Ce(NO sub 3) sub 4 and in the form of H sub 2 [Ce(NO sub 3) sub 6] have been clarified. The extraction was performed at 25 + or - 0.05C. The cerium was determined by means of potentiometric titration with perchloric acid, and the nitric acid was titrated with sodium hydroxide. It was shown that cerium is extracted in the form of Ce(NO sub 3) sub 4. The analysis shows that in the organic phase there is no relationship between the quantity of Ce(NO sub 3) sub 4 and HNO sub 3, apparently only their common extraction has a meaning and not the extraction of these individual compounds. The distribution coefficient of HNO sub 3 in most cases does not exceed 0.2. The results obtained point to the

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L 12413-63
ACCESSION NR: AP3001406

possibility of a rapid extraction of cerium (IV) from 1 to 2M solutions of HNO sub 3. Orig. art. has: 1 table and 1 graph.

ASSOCIATION: Institut neorganicheskoy khimii Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Inorganic Chemistry, Siberian Department, Academy of Sciences SSSR)

SUBMITTED: 22Feb63 DATE ACQ: 01Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 009 OTHER: 002

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

NIKOLAYEV, A.V.; RYABININ, A.I.; AFANAS'YEV, Yu.A.

Mechanism of cerium (IV) nitrate extraction from nitric acid solutions by tributyl phosphate. Dokl. AN SSSR 150 no.4: 820-822 Je '63. (MIRA 16:6)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR. 2. Chlen-korrespondent AN SSSR (for Nikolayev).
(Cerium nitrates) (Butyl phosphates)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, Aleksandr Konstantinovich; MOSHKIN, A.S., red.; BARANOV, I.A., tekhn.red.

[From the Arctic to the Antarctic; travel diaries] Iz Arktiki v Antarktiku; putevye dnevniki. Murmansk, Murmanskoe knizhnoe izd-vo, 1959. 253 p. (MIRA 13:4)
(Polar regions--Description and travel)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

9(2) SOV/112-59-5-9930

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 5, p 214 (USSR)

AUTHOR: Ryabinin, A. N.

TITLE: Wire Stripper for PEV and PEM Wires

PERIODICAL: Radiotekhn. proiz-vo, 1957, Nr 14, p 54

ABSTRACT: Tentative operation of a machine for stripping the ends of PEV and PEM wires is reported. The machine is equipped with special rotating metal brushes; the machine has doubled labor productivity, has cut the electric energy consumption, and has improved the quality of stripping.

N.G.K.

Card 1/1

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, A.N.

Miniature automatic press. Mashinostroitel' no.7:27 '61. (MIRA 14:7)

(Power presses)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, A.N.

RYABININ, A.N.

Note on the flying Jurassic lizard of Kara-Tau. Trudy Paleont. inst. 15 no.1:86-93 '48. (MLRA 10:7)
(Kara-Tau--Lizards, Fossil)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, A.N.

Jurassic turtle from Kara-Tau. Trudy Paleont. inst. 15 no.1:94-98 '48. (MLRA 10:7)
(Kara-Tau--Turtles, Fossil)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, A.N. [deceased]; SHISHKIN, M.A.

Upper Permian labyrinthodont Jugosuchus. Paleont.zhur. no.1: 140-145 '62. (MIRA 15:3)

1. Paleontologicheskiy institut AN SSSR.
(Amphibia, Fossil)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, A.V.

The care of housing facilities is everybody's job. Gor. khoz. Mosk. 36 no.3:3-5 Mr '62. (MIRA 15:6)

1. Zamestitel' predsedatelya Ispolnitel'nogo komiteta Moskovskogo Soveta deputatov trudyashchikhsya.
(Moscow--Housing)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, A.V.

Cooperative construction of apartment houses in Moscow. Gor. khoz.Mosk. 36 no.11:3-4 N '62. (MIRA 15:12)

1. Zamestitel' predsedatelya Ispolnitel'nogo komiteta Moskovskogo Soveta deputatov trudyashchikhsya.
(Moscow--Apartment houses)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

KISELEV, V.P., inzh.; RYABININ, A.Ye., inzh.

End form cutter for milling grooves in taps. Mashinostroenie no.1:15-17 Ja-F '63. (MIRA 16:7)

1. Khar'kovskiy zavod konditsionerov.
(Milling machines)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

KISELEV, V.F., inzh.; RYABININ, A.Ye., inzh.

Milling grooves of capped countersinks with end form cutters.
Mashinostroenie no.5:37 S-O '65. (MIRA 18:9)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, A.Ye.; KISELEV, V.P.

Form cutter. Mashinostroitel' no.8:26 Ag '62. (MIRA 15:8)
(Metal-cutting tools)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, B.

Sight service. Nauka i zhizn' 30 no.4:100-103 Ap '63.
(MIRA 16:7)

(Seeing eye dogs)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, B.

Hot ocean. Nauka i zhyttia 12 no.11:48-52 N '62. (MIRA 16:1)
(Thermal waters)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

LEONOV, Leonid; RYABININ, Boris

Answers to our mail or the final paragraph of our article on "bugs...!" Nauka i zhizn' 29 no.11:34-36 N '62. (MIRA 16:1)
(Wild life, Conservation of)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

GERSHGORN, M.A.; KRAVTSOVA, I.P.; KAZARNOVSKIY, D.S., kand. tekhn. nauk; RYABININ, B.G.

Manganese Bessemer steel for rails. Met. i gornorud. prom. no.5: 23-26 S-O '64. (MIRA 18:7)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

[illegible]

[illegible] for the manufacture of "peronite" (asbestos-rubber) sheets. Prim. prom. [Ukr.] no.4:45-47 O-D '61.

(MIRA 17:6)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

[redacted], Assistant

[redacted]ing the extrusion process of plastics. Khim. mashinostr. no.1:45-58 '65. (MIRA 18:9)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, D.D.; ANDRIYCHUK, V.D.; POLIV'YANIY, A.P. [Polyv'ianyi, A.P.]

Design of mixers for plastics. Khim.prom. [Ukr.] no.1:80-82 Ja-Mr '64. (MIRA 17:3)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, D.D.; POLYVYANYY, A.P.

Unit for casting capron parts. Mashinostroitel' no.6:37-38 Je '64. (MIRA 17:8)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

ACCESSION NR: AR4039306 S/0044/64/000/003/V041/V041

SOURCE: Ref. zh. Matematika, Abs. 3V146

AUTHOR: Ryabinin, I. A.

TITLE: A statistical estimate for the reliability of generators of ship's power systems with a calculation of repair and reserve potential

CITED SOURCE: Sb. Primeneniye veroyatnostn. i statist. matodov k analizu usloviy raboty* elementov energ. sistem. Vy*p. 5. Kiyev. Gostekhizdat, USSR, 1963, 15-27

TOPIC TAGS: generator reliability statistical estimate, ship power system, repair calculation, reserve potential calculation, efficiency probability, repair duration, Poisson law, Markov process

TRANSLATION: A system, consisting of two generators of the same capacity W, is considered efficient if it guarantees generating an energy W. The reliability of this system is characterized: 1) by the probability $\pi(t)$ of finding the system efficient at the moment t; 2) by the probability $R(t,\tau)$ that the system will be

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ACCESSION NR: AR4039306

efficient for a duration of time τ, starting at moment t. It is assumed that 1) the breakdowns of each generator follows the Poisson law, 2) the duration of repair of each generator follows the exponential law, 3) in a non-operational state the generator does not become useless. With these assumptions by means of Markov processes with a countable set of states and a continuous time, the author derives expressions for $\pi(t)$ and $R(t,\tau)$ which correspond to four different variations of maintenance and reserve potential for generators. The author discusses the effect of choosing one of the variations upon the reliability of the system. A. Petrov.

DATE ACQ: 22Apr64 SUB CODE: MA ENCL: 00

Card 2/2

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

VILESOV, D.V., dotsent, kand.tekhn.nauk (Leningrad); RYABININ, I.A., kand. tekhn.nauk (Leningrad)

Selecting the basic parameters of excitation systems for self-exciting synchronous generators. Elektrichestvo no.3:20-24 Mr '60. (MIRA 13:6)

(Electric generators)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

VILESOV, Dmitriy Vasil'yevich; RYABININ, Igor' Alekseyevich; FEDOROV, A.V., red.; SLEPTSOVA, Ye.N., tekhn. red.

[Self-exciting synchronous generators on ships] Sudovye samovozbuzhdaiushchiesia sinkhronnye generatory. Moskva, Voenizdat, 1962. 179 p. (MIRA 15:9)
(Electricity on ships) (Electric generators)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

VILESOV, Dmitriy Vasil'yevich, kand.tekhn.nauk, dotsent;
RYABININ, Igor' Alekseyevich, kand.tekhn.nauk, prepodavatel'

Regulation of self-exciting synchronous generators with consideration of the steady-state conditions of the load. Izv. vys. ucheb. zav.; elektromekh. 3 no.6:93-104 '60. (MIRA 15:5)

1. Voyenno-morskaya akademiya korablestroyeniya i vooruzheniya.
(Electric generators)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

27136. RYABIKIN, B.-- Belaya zhest'. O seversic. Zavode. Ocherk. Ural'skiy sovrerennik, No. 15, 1949, c. 146-72.

SO: Letopis' Zhurnal'nykh Statey, Vol. 36, 1949

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, B. (g.Sverdlovsk)

Be kind. IUn.tekh. no.9:64-67 S '60. (MIRA 13:10)
(Animals, Treatment of)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

LEONOV, Leonid; RYABININ, Boris

Always the same subject: man, soul, and..."bugs." Nauka i zhizn' 28 no.8:38-39 Ag '61. (MIRA 14:8)
(Animals, Treatment of)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

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RYABININ, B.

27176

Belaya zhest' (O severek zavode. Ocherk) Ural'skiy sovremennik, No 15, 1949, S. 146-72

SO: LETOPIS' No. 34

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, B.A., inzhener.

Experience with increasing labor productivity and reducing personnel in electric power stations. Elek.sta. 28 no.1:71-72 Ja '57. (MLRA 10:3)

(Electric power stations)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

MASHIN, N. I.

"Work of the dispatcher's desk in the Magnezit Works,"

Ogneupory, No. , 1943

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, Boris Stepanovich; PONOMAREVA, L.K., redaktor; LAPRUN, K.I., tekhnicheskiy redaktor

[The amateur dog breeder; advice to beginners] Liubitel'- sobakovod; sovety nachinaiushchemu. Molotov, Molotovskoe kn-vo, 1955. 159 p. (MLRA 9:11)
(Dogs)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, Boris Stepanovich; TARCHEVSKIY, Vitaliy Vladislavovich; DAVYDOVA, I., red.

[Friendly hand to nature!] Ruku druzhby - prirode! Sverdlovsk, Sverdlovskoe knizhnoe izd-vo, 1962. 119 p. (MIRA 18:3)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, B.Ya., inzhener; MAR'YANKO, G.S., inzhener.

Mechanization of ring bending from bulb-bar shapes. Sudostroenie 23 no.1:58-59 Ja '57. (MIRA 10:10)
(Metalworking machinery)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, D.D.

Factors affecting the uniformity of the thickness of sheets in calendering. Kauch. i rez. 20 no.10:28-33 O '61. (MIRA 14:12)

1. Kiyevskiy politekhnicheskiy institut.
(Rubber)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, D.D., inzh.; POLYVYANYY, A.P., inzh.

Using capron parts in the manufacture of chemical machinery. Mashinostroenie no.3:107-109 My-Je '63. (MIRA 16:7)

1. Kiyevskiy zavod "Bol'shevik".
(Nylon)
(Chemical engineering—Equipment and supplies)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, D.D., inzh.; ANDREYCHUK, V.P., inzh.

High-pressure rubber mixers. Mashinostroenie no.5:3-7 S-O '63. (MIRA 16:12)

1. Kiyevskiy politekhnicheskiy institut i Kiyevskiy zavod "Bol'shevik."

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, D.D.; POLIV"YANIY, A.P. [Polyv'ianyi, A.P.]

Equipment for the continuous polymerization of polyisoprene synthetic rubbers. Khim. prom. [Ukr.] no.2:56-59 Ap-Je '63. (MIRA 16:8)

1. Kiyevskiy politekhnicheskiy institut i Kiyevskiy zavod "Bol'shevik".

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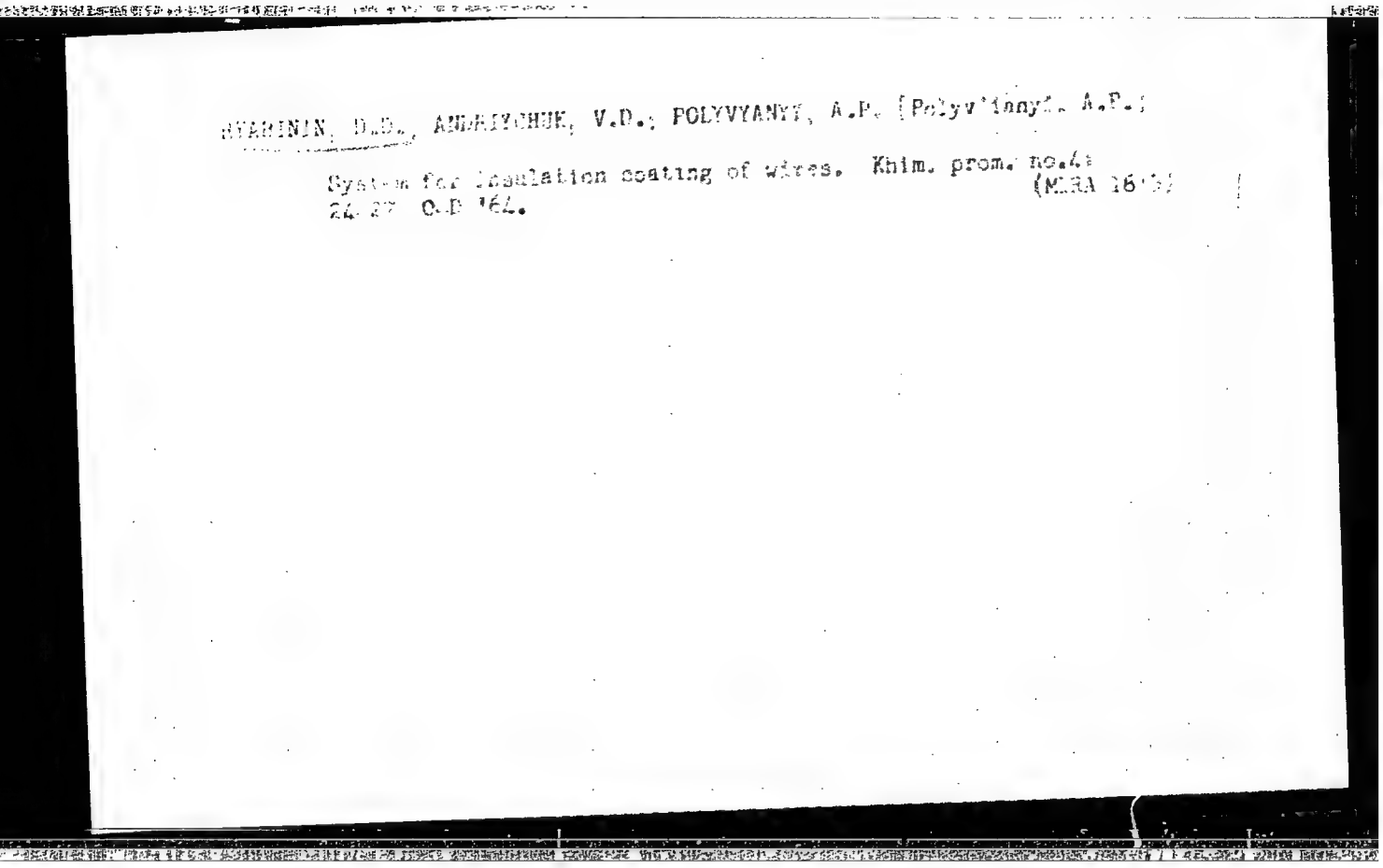

AVARENIN, D.D., ANDRIYCHUK, V.D.; POLYVYANYY, A.P. [Polyv'ianyi, A.P.]

System for insulation coating of wires. Khim. prom. no.4:
24-27 O-D '64. (MIRA 18:5)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, D.D.

Determining the viscosity of dispersion systems and polymeric materials. Khim. prom. [Ukr.] no.3:62-64 Jl-S '64. (MIRA 17:12)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, D.D.; ILKACH, Yu.Ye.; ZAVGORODNIY, V.K., inzh., retsenzent; KARGIN, V.G., inzh., red.

[Screw extruders for processing plastics and rubber mixes] Chervyachnye mashiny dlia pererabotki plastichaskikh mass i rezinovykh smesei. Moskva, Mashinostroenie, 1965. 362 p. (MIRA 18:3)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0"

"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, D.D.; ANDREYCHUK, V.D.

Selecting the neck packing for the rotor of rubber mixers. Kauch. i rez. 23 no.1:17-21 Ja '64. (MIRA 17:2)

1. Kiyevskiy politekhnicheskiy institut i Kiyevskiy zavod "Bol'shevik".

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, D.D.

Data on testing a cord calendar with a Z-shaped distribution of rolls. Kauch. i rez. 20 no.12:43-48 D '61. (MIRA 15:1)

1. Kiyevskiy politekhnicheskiy institut.
(Rubber machinery)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

BROVARNIK, Ye.G.; RYABININ, D.D.

Machines for the production of viscose. Khim. volok. no.2:60-62 '59. (MIRA 12:9)

1.Zavod "Bol'shevik," Kiyev.
(Viscose)

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RYABININ, D. D., inzh.

Joints without keys used in the chemical machinery industry. Mashinostroenie no.5:11-13 S-O '62. (MIRA 16:1)

1. Kiyevskiy politekhnicheskiy institut.

(Chemical engineering—Equipment and supplies)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, D.D.; ANDREYCHUK, V.D.

Characteristics of rolls of a modernized design. Kauch.i rez. 21 no.9:26-31 S '62. (MIRA 15:11)

1. Kiyevskiy zavod "Bol'shevik" i Kiyevskiy politekhnicheskiy institut.

(Rolls (Iron mills))

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, F.R., inzh.

Shaft sinking at the "Chaykino-Glubokaya" mine no. 2 with use of KS-2 equipment. Shakht. stroi. no.8:23-25 Ag '58. (MIRA 11:9)

1.Nachal'nik 4-go prokhodcheskogo stroyupravleniya tresta Stalinshakhtoprokhodka.
(Donets Basin--Shaft sinking) (Coal mining machinery)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

STYUSHIN, N. G.; VARSHNEY, B. S.; RYABININ, G. A.

"On some characteristics of heat transfer and of flow resistance in subcooled boiling."

paper submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

Moscow Inst of Chemical Apparatus.

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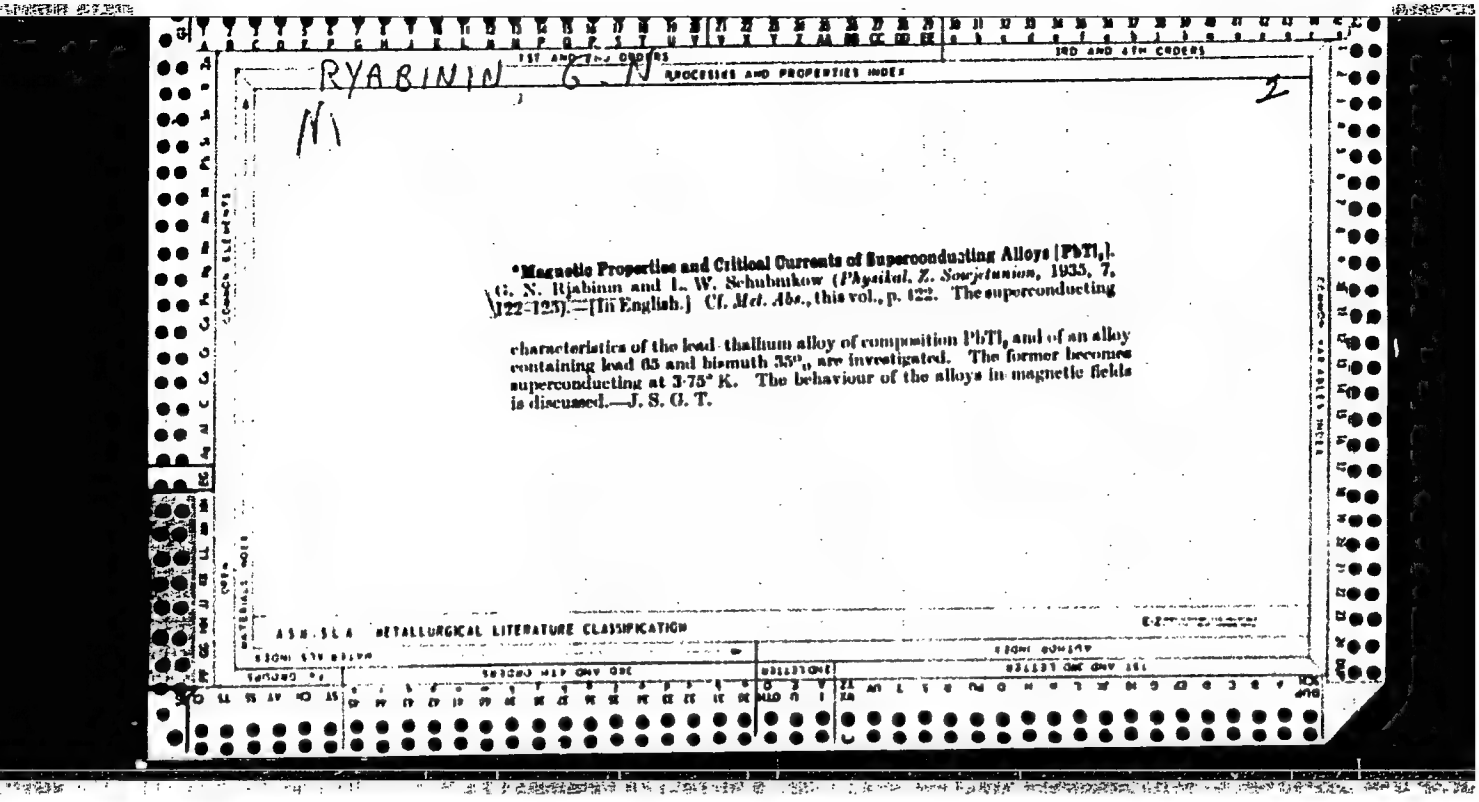

RYABININ G. N.

N1

1

***Magnetic Properties and Critical Currents of Superconducting Alloys [$PbTl_3$].** G. N. Rjabinin and L. W. Schubnikow (*Physikal. Z. Sowjetunion*, 1935, 7, 122–125).—[In English.] Cf. *Met. Abs.*, this vol., p. 122. The superconducting characteristics of the lead-thallium alloy of composition $PbTl_3$ and of an alloy containing lead 65 and bismuth 35%, are investigated. The former becomes superconducting at 3·75° K. The behaviour of the alloys in magnetic fields is discussed.—J. S. G. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, G. N.

"Plasticity of Solids at High Pressures,"

paper presented at the Conf. on Mechanical Properties of Non-Metallic Solids, Leningrad, USSR, 19-26 May 58.

Laboratory of Physics of Super High Pressures of the Academy of Sciencs of the USSR, Moscow.

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYBIN, R.A.

Effect of the tube diameter on the magnitude of the critical thermal load in boiling of water. Inzh.-fiz.zhur. 6 no.2:15-19 F '63. (MIRA 16:1)

1. TSentral'nyy kotloturbinnyy institut imeni Polzunova, Leningrad.
(Thermodynamics) (Ebullition)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, I., kapitan dal'nego plavaniya.

On the Coromandel Coast. Vokrug sveta 6:33-38 Je '53. (MLRA 6:6)
(Madras Province--Description and travel)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

SOV/144-59-2-2/19

AUTHORS: Ryabinin, I.A., Candidate of Technical Sciences, Lecturer and Raimov, M.M., Senior Scientific Worker

TITLE: The Use of Electronic Simulators for Investigating the Stability of Parallel Operation of Alternators of Comparable Power

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika, 1959, Nr 2, pp 11 - 26 (USSR)

ABSTRACR: The transient behaviour of coupled alternators is strictly described by non-linear differential equations which are not solvable in their most general form. Even if the simpler problem of so-called static stability is resorted to, the high order of the system is a great disadvantage. It is, however, necessary to make a complete assessment of static stability in connection with present developments on the voltage- and frequency-control of alternators taking hunting into account. Refs 4, 9 and 10 describe how electronic computers, both analogue and digital, have been used to solve similar problems. The particular example studied is shown in

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The Use of Electronic Simulators for Investigating the Stability of Parallel Operation of Alternators of Comparable Power

Figure 1 as two coupled alternators feeding a load. The equations used were first proposed by A.A. Gorev (Ref 2). They are the set of ten denoted by (A). The power balance equations (active and reactive) are (B) and the voltage-regulator equations for a phase-compounded machine are (B). The complete system is tenth order and has 22 non-linearities. If the influence of transient oscillations of current on the rotor motion is neglected the order may be reduced to 6 and the non-linearities to 14. The number of function generators necessary for a conventional solution was not available and the investigation was thus limited to "small" scale. The equation system must first be linearized as Eq (1). This process takes into account: 1 - losses in the stator circuit; 2 - the saliency of the alternator poles; 3 - transient electromagnetic processes in the field and stator windings; 4 - the torque-speed mechanical characteristic of the prime movers; 5 - the static characteristics of the load for voltage and frequency; 6 - the automatic voltage

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regulator. On the other hand, the influence of: a) the dynamic characteristics of the load; b) the dynamic characteristics of the prime mover speed regulator - are ignored. If it is supposed that each alternator is rated at 30 kVA and is loaded 50%, the insertion of numerical values gives Eq (2). The computer chosen is the MPT-9 containing 48 operational amplifiers with automatic zero setting. Each amplifier can sum up to 12 quantities. 48 constants and 48 variable coefficients can be set in. The variable is a direct voltage in the computing range $\pm$ 100 V. The maximum computing error does not exceed $\pm$ 0.5%. Drift is less than 100 μV over 10 minutes. The form of the equations as fed to the machine is Eq (5). The scale is chosen from a consideration of the peak values likely to be obtained. Each "machine" second represents 10 synchronous "alternator" seconds. Two coordinates, ΔS_q and ΔU, have been excluded as less important. As written, Eq (5) would require 70 voltage

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The Use of Electronic Simulators for Investigating the Stability of Parallel Operation of Alternators of Comparable Power

dividers but the block diagram adopted (Figure 2) reduces this requirement to 64. Besides these, 11 summing, 10 integrating and 10 inverting amplifiers are used. The specific topics examined are: stability in the absence of voltage control; stability with voltage control; the effect of the slope of the torque-speed characteristic of the prime mover on the transient response; the effect of stator resistance on system behaviour. In each experiment, the constants have the same values and the disturbance is a unit function. Figure 3 was taken without voltage control. Figure 4 shows the effect of the excitation parameter K on parallel working. With $K > 1$ the system is unstable. Figure 5 shows the effect of damping torque when $K = 1.2$. The features specially stressed in this study are: relative simplicity of the method; comparatively little difficulty encountered; the direct, graphic appeal of the results; possibility of introducing non-linear effects. The disadvantage of relative inaccuracy is

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The Use of Electronic Simulators for Investigating the Stability of Parallel Operation of Alternators of Comparable Power

not important in this application.
There are 8 figures and 10 references, 9 of which are Soviet and 1 English.

ASSOCIATION: Voyenno-Morskoy akademii korablestroyeniya i vooruzheniya imeni A.N. Krylova (The A.N. Krylov Naval Academy of Ship Building and Armaments)

SUBMITTED: December 15, 1958

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, Igor' Alekseyevich, kand. tekhn. nauk, dotsent, starshiy prepodavatel'

Equivalent circuit of the self-excitation system of synchronous generators. Izv. vys. ucheb. zav.; elektromekh. 5 no.11:1233-1239 '62. (MIRA 16:1)

1. Voyenno-morskaya akademiya.

(Electric generators)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

VILESOV, D.V., kand.tekhn.nauk, dotsent (Leningrad); RYABININ, I.A., kand. tekhn.nauk (Leningrad)

Method for determining the steady-state short-circuit current of a self-exciting synchronous generator. Elektrichestvo no.6:45-49 Je '61. (MIRA 14:10)

(Electric generators)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, I.A., kand.tekhn.nauk

Quantitative evaluation of the reliability of marine electric power systems. Sudostroenie 29 no.7:32-35 Jl '63. (MIRA 16:9)
(Electricity on ships)

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TIMOFEYEV, Vladimir Andreyevich, prof., doktor tekhn.nauk; MORDOVIN, B.M., prof., retsenzent; RYABININ, I.A., dots., kand. tekhn. nauk, inzh.-kapitan III ranga, retsenzent; GAKKEL', Ye.Ya., doktor tekhn. nauk, prof., retsenzent; ARANOVICH, B.I., dots., kand. tekhn. nauk, retsenzent; GORBENKO, B.M., st. prepodavatel', retsenzent; GEKTOR, D.S., retsenzent; VOL'PE, L., red.

[Fundamentals of the theory of automatic control] Osnovy teorii avtomaticheskogo regulirovaniia; uchebnoe posobie. Leningrad, Severo-Zapadnyi zaochnyi politekhnicheskii in-t. No.2. 1962. 195 p. (MIRA 17:1)

1.Voyenno-morskaya akademiya korablestroyeniya i vooruzheniya imeni A.N.Krylova (for Mordovin,Ryabinin).

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VILESOV, D.V. (Leningrad); RYABININ, I.A. (Leningrad)

Transient operation of a current transformer feeding an active inductive load through a rectifier. Izv.AN SSSR. Otd. tekh. nauk Energ. i avtom. no.1:56-61 Ja-F '61. (MIRA 14:3)
(Electric transformers)
(Transients (Electricity))

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RYABININ, I.M.

Composition for filing dents in automobile bodies. G.S. PETROV, G.S. BRODSKIY, V.A. SVESHNIKOV, L.D. RADCHIK, F.L. KLIBANOVA, V.I. FEDOTOV, AND I.M. RYABININ. U.S.S.R. 105, 656 May 25, 1957. A powd. mixt. of poly-(vinyl Butyral) PhOH-HCHO resin and hexamethylenetetramine is used as filler for smoothing out uneven spots in automobile bodies as replacement Pb-Sn-alloys.

M.Hoseh

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GEYMAN, V.; RYABININ, L.

Everyday routine of great work; excerpts from a motion-picture script. Tekh.mol. 28 no.4:7 '60. (MIRA 13:11)
(Lenin, Vladimir Il'ich, 1870-1924)

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L 01275-67 EWS-2/EWT(1) DS

ACC NR: AP6007303 SOURCE CODE: UR/0209/66/000/002/0086/0090

AUTHOR: Ryabinin, L. (Engineer, Major); Terebin, I. (Engineer, Major)

ORG: none

TITLE: Silver-zinc batteries

SOURCE: Aviatsiya i kosmonavtika, no. 2, 1966, 86-90

TOPIC TAGS: silver zinc battery, electrocrystallization/15STsS-45 silver zinc battery

ABSTRACT: The 15STsS-45 silver-zinc battery is now widely used in aviation because of its small weight per unit of power, small dependence of output power on discharge current, and relatively stable voltage. The operation of these batteries requires special attention to prevent spontaneous ignition caused by the steplike changes of voltage during discharge and the decrease in output power at negative temperatures. The chemical reactions during discharging and recharging of the battery are: (1) $Ag_2O + Zn \rightleftarrows 2Ag + ZnO$, and (2) $AgO + Zn \rightleftarrows Ag + ZnO$. The separation of zinc by the discharge of zincate ions from the electrolyte, which are present in the pores of the electrode may cause their growth in the form of acicular dentrites (electrocrystallization). The crystals of zinc dendrites growing through separator films may form a bridge between the positive and the negative electrodes and cause an internal short circuit. To prevent electrocrystallization, the active masses of electrodes are taken in such

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ratio that, after complete charging of the battery, the zinc electrode contains an excess of zinc oxide. Nevertheless, electrocrystallization occurs. The rate of growth of the zinc dendrites through the separating walls depends on many factors: quality and thickness of separators, number of layers of separating films, current density during recharge, and the exposure (time) of the separating film to the alkaline solution. Vibrations, shock stresses, and temperature changes also affect the process. The generation and growth of an increasingly larger number of new sources of internal short circuiting is promoted also by an increase in the recharging current, because the battery is switched to a generator having a constant voltage. The current density increases in places of internal short circuiting because of the same direction of recharging and short-circuit currents. This results in local overheating, liberation of gases, splashing of electrolyte, and ignition of the caprone jacket and separating films, and may ignite the entire battery. The switching off of the ignited battery extinguishes the flame because of a lack of oxygen (the batteries are in sealed containers with heat-insulating jackets). The ignited battery, if not switched off, can cause an explosion because of the ignition of oxygen and hydrogen gases. Self-ignition of the 15StsS-45 battery can be prevented by a strict control of voltage during discharge and recharge of the battery. But this is time consuming. E. Kuskov, A. Fetisov, and N. Sukonnikov have designed a small semiautomatic device (see figure) for the control of voltage during charging and recharging. It consist of a commutator K, an analyzer A, and a signal device C. The commutator switches each battery on and off alternately to the analyzer. The time of commutation of each battery is controlled by the combined

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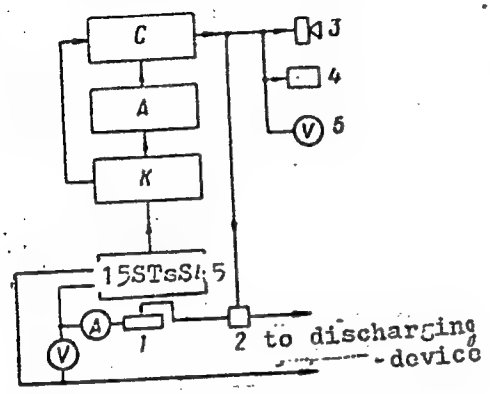
action of the analyzer and the signal device. The signal device C signals on a switchboard 4 the number of the battery in which the voltage is out of range 1-2.1 v, switches on a ring or siren 3, and, after a certain time, switches off the battery from the feeding source. It also connects a voltmeter 5 (0.5-1 v) with the battery. Orig. art. has: 5 fig. and 2 formulas.



SUB CODE: 10/ SUBM DATE: none

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, L.

Weather Forecasting

What kind of weather tomorrow? Znan.sila 22 no. 8, 1952.

Monthly List of Russian Accessions. Library of Congress, December 1952. UNCLASSIFIED

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RYABININ, L., inzh.-mayor; TEREBIN, I., inzh.-mayor

Attention: silver-zinc batteries. Av. i kosm. no.2:86-90 F '66. (MIRA 19:1)

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KOZIN, A.I.; TRUNOV, A.F.; SOVENKO, P.S.; YEGOROVA, Ye.I.; AKATNOV, I.N.; KOLUSHEV, V.I.; PANASENKO, L.I.; KATS, A.R.; AKSENOV, T.Ye.; LYUBIN, S.G.; SOSNER, S.Ye.; RYABININ, M.M.; MEL'NIKOV, P.N.; KLYUSHINA, L.T.; KUTUZOVA, M.G.; GOLOVNYA, V.S.; IVANOV, A.F.; SINEV, I.I.

I.A. Danilov; obituary. Muk.-elev. prom. 26 no. 12:26 D '60. (MIRA 13:12)

(Danilov, Ivan Aleksandrovich, d. 1960)

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"APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001446230001-0

RYABININ, M.N.

Longitudinal magnetoresistance of semiconductors of n-germanium type within the quantum limit. Fiz.tver.tela 3 no.5:1310-1313 My '61. (MIRA 14:6)

1. Institut poluprovodnikov AN SSSR, Leningrad.
(Germanium) (Magnetoresistance)

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23097
S/181/61/003/005/002/042
B101/B214

9.4300 (1158, 1137, 1147)

AUTHOR: Ryabinin, M. N.

TITLE: Longitudinal magnetic resistance of n-type germanium semiconductors in the quantum limit

PERIODICAL: Fizika tverdogo tela, v. 3, no. 5, 1961, 1310-1313

TEXT: The following notations are introduced for the calculation of the longitudinal magnetic resistance of n-type Ge: a_{ij} = direction cosines of the principal axis ξ_i of the isoenergetic ellipsoid, related to the x_j axis, m_2 = electron mass corresponding to the ξ_3 axis, m_1 = the mass corresponding to the two other axes where $\nu = m_1/m_2 < 1$. The magnetic field is assumed to be directed along the x_3 axis; the components of the vector potential are written as: $A_1 = Hx_1(1 - \nu)\alpha_{31}\alpha_{32}/\left[1 + (\nu - 1)\alpha_{31}^2\right]$; $A_2 = Hx_1$; $A_3 = 0$. The wave function and the energy of an electron in the steady state with quantum numbers n, k_2, k_3 are given by the equations:

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Longitudinal magnetic ...

$$\psi_{n,k_2,k_3}=\Phi_n[\alpha(x_1-x_{10})]\exp i\left[k_2x_2+k_3x_3+\right. \quad (1), \text{ and}$$

$$\left.+\frac{(1-\nu)\,a_{31}}{1+(\nu-1)\,a_{31}^2}(a_{32}k_2+a_{33}k_3)\,x_1\right], \quad (2),$$

$$E_{n,k_2,k_3}=\hbar\omega\sqrt{\nu+(1-\nu)\,a_{33}^2}\left(n+\frac{1}{2}\right)+\frac{\hbar^2}{2m_1}\frac{\nu}{\nu+(1-\nu)\,a_{33}^2}k_3^2,$$

respectively. Here Φ_n is the Hermite function, $\omega \equiv eH/m_1c$, and

$$\alpha^2=\frac{m_1\omega}{\hbar}\frac{\sqrt{\nu+(1-\nu)\,a_{33}^2}}{1+(\nu-1)\,a_{31}^2}, \quad (A).$$

$$x_{10}=-\frac{\hbar}{m_1\omega}k_2-\frac{\hbar}{m_1\omega}\frac{(\nu-1)\,a_{32}a_{33}}{\nu+(1-\nu)\,a_{33}^2}k_3.$$

The quantum mechanical mean values of the velocity components in the state (1) are given by:

$$v_1=v_2=0;\quad v_3=\frac{1}{\hbar}\frac{\partial E_{n,k_2,k_3}}{\partial k_3}=\frac{\hbar k_3}{m_1}\frac{\nu}{\nu+(1-\nu)\,a_{33}^2}. \quad (3).$$

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Longitudinal magnetic ...

The matrix element $\exp(\pm iqr)$ of the plane wave of Eq. 1 differs from zero only when the law of conservation is fulfilled for the sum of the two components of the quasi-momenta: $k_2' = k_2 \pm q_2$; $k_3' = k_3 \pm q_3$ (4). Therefore

$$(0, k_2', k_3'|\exp(\pm iqr)|0, k_2, k_3) = \exp\left(-\frac{\beta_{ik}q_iq_k}{4\alpha^2}\right) \qquad (5)$$

holds in the quantum limit ($n = n' = 0$). In the calculation of Eq. (5) the law of conservation Eq. (4) and the notations

$$\beta_{11} = 1,$$

$$\beta_{22} = \left[\nu + (1-\nu)\alpha_{33}^2 + (1-\nu)^2\alpha_{31}^2\alpha_{32}^2\right]\left[1+(\nu-1)\alpha_{31}^2\right]^{-2}, \qquad (B)$$

$$\beta_{33} = (1-\nu)^2\alpha_{32}^2\left[\alpha_{31}^2 + \frac{\alpha_{32}^2}{\nu+(1-\nu)\alpha_{33}^2}\right]\left[1+(\nu-1)\alpha_{31}^2\right]^{-2},$$

$$\beta_{ik} = \beta_{ki} = \frac{(\nu-1)\alpha_{3i}\alpha_{3k}}{1+(\nu-1)\alpha_{31}^2} \quad (i \neq k).$$

are used. The form $\beta_{ik}q_iq_k$ is degenerate (det $\beta = 0$) and can be brought in

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Longitudinal magnetic ...

the diagonal form $p_1^2 + p_2^2$ by means of the transformation:

$$\begin{pmatrix} p_1 \\ p_2 \\ p_3 \end{pmatrix} = \begin{pmatrix} 1 & \beta_{12} & \beta_{13} \\ 0 & \sqrt{\beta_{22} - \beta_{12}^2} & \frac{\beta_{23} - \beta_{12}\beta_{13}}{\sqrt{\beta_{22} - \beta_{12}^2}} \\ 0 & 0 & 1 \end{pmatrix} \begin{pmatrix} q_1 \\ q_2 \\ q_3 \end{pmatrix} \quad (6).$$

The interaction of the conductivity electrons with the long wave acoustic phonons is described by the isotropic deformation potential $V = D \operatorname{div} \vec{u}$ (D = constant, $\vec{u}$ = vector of lattice displacement). The influence of magnetic quantization on the longitudinal galvanomagnetic effect can be taken into account by a kinetic equation in which the transitions between the steady states of Eq. (1) are studied. From the exponential form of Eq. (5) it is concluded that only phonons with $q < \alpha$ are effective. Then the scattering is elastic for $H = 5 \cdot 10^5$ gauss and $T \geq 10^{\circ}K$. Together with the condition $\hbar\omega \geq k_0 T$ (k_0 = Boltzmann constant), this gives a sufficient temperature interval for the application of the classical phonon distribution $N_q = k_0 T/\hbar v q$ (7). The relaxation time is given by:

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Longitudinal magnetic ...

$1/\tau = \sum'_{n,k_2',k_3'} W(n,k_2,k_3; n,k_2',k_3') (1 - k_3'/k_3)$ (8), where W denotes the transition probability. With the help of Eqs. (5), (6), and (7):

$1/\tau = (2\pi/\hbar)(D^2/\varrho v^2) k_0 T n(E)$ (9), where ϱ is the mass density of the crystal, n(E) the number of states per unit interval of the longitudinal energy in the unit volume for one spin direction:

$$n(E) = \frac{(m_1 m_2)^{1/2}}{2^{3/2}\pi^2\hbar^3} \hbar\omega \sqrt{\nu + (1 - \nu)\alpha_{33}^2}\, E^{-1/2} \quad (10).$$

The distribution of the conduction electrons has been taken to be nondegenerate in the range investigated. The kinetic equation then yields for the conductivity

$$\sigma = \frac{e^2 h}{\pi m_3} \frac{\varrho v^2}{D^2} A \exp \frac{\mu}{k_0 T}, \quad (11),$$

where

$$A = \sum_j (\cos^2\theta_j + \nu \sin^2\theta_j)^{-1} e^{-\frac{\hbar\omega}{2k_0 T}\sqrt{\cos^2\theta_j + \nu\sin^2\theta_j}}, \quad (C).$$

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Longitudinal magnetic ...

J is the number of the ellipsoid, $\cos\theta_j = \alpha_{33j}$. In the case of a monovalent impurity the chemical potential is calculated from

$$n_1\left(1+\exp\frac{\Delta E+\mu}{k_0T}\right)^{-1}=\frac{k_0Tm_1^{3/2}}{(2\pi\hbar^2)^{3/2}}\hbar\omega B\exp\frac{\mu}{k_0T}. \qquad (12)$$

where n_1 is the concentration of the donors, ΔE the gap between the donor level and the bottom of the conduction band, and

$$\beta=\sum_j\sqrt{\cos^2\theta_j+\nu\sin^2\theta_j}\,e^{-\frac{\hbar\omega}{2k_0T}\sqrt{\cos^2\theta_j+\nu\sin^2\theta_j}} \qquad (D).$$

It follows from Eqs. (11) and (12) that σ decreases at low temperatures with increasing magnetic field essentially as $\exp(-\hbar\omega/4k_0T)$. Professor A. I. Anselm is thanked for guiding the work. There are 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc. The reference to English-language publication reads as follows: - P. N. Argyres, E. N. Adams, Phys. Rev. 104, 900, 1956.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors, AS USSR, Leningrad)

SUBMITTED: November 4, 1960

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RYABININ, N.

Filters and filtration

Increasing the effectiveness of details of the S-80 fuel filter. MTS, 12, no. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, August 1953. Unclassified.

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YUDIN, V.I.; TARTAKOVSKAYA, R.Z.; KRUSHCHANSKAYA, D.Z.; FEDORISHCHEV, T.I.; RYABININ, N.A.; KALGANOV, M.N.; Prinimala uchastiye BEREZINA, S.S.

Production of pine tar for the needs of the rubber industry based on the utilization of waste resins from the Verkhnyaya Siniachikha Wood Chemical Combine. Kauch.i rez. 21 no.8:49-51 Ag '62. (MIRA 16:5)

1. Sverdlovskiy zavod rezino-tekhnicheskikh izdeliy i Sverdlovskiy nauchno-issledovatel'skiy institut pererabotki drevesiny (for all except Berezina).
(Verkhnyaya Seniachikha--Wood-using industries--By-products)
(Wood tar)

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FEDORISHCHEV, T.I.; RYABININ, N.A.; KALGANOV, M.N.

Tar softener for rubber. Gidroliz. i lesokhim.prom. 16 no.1:15-16 '63. (MIRA 16:2)

1. Sverdlovskiy nauchno-issledovatel'skiy institut pererabotki drevesiny.

(Wood tar) (Rubber)

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